REMARKS

Applicant has carefully reviewed and considered the Examiner's Action mailed October 16, 2008. Reconsideration is respectfully requested in view of the comments set forth below.

Claims 7, 9, 13-16, 18-19 and 23-24 were rejected under 35 U.S.C. §103(a) as being unpatentable over International Publication W) 02/073086 A1 to Honeywell in view of U.S. Patent NO. 3, 010,024 to Barnett et al. (hereinafter referred to as "Barnett") and further in view of U.S. Patent No. 6,678,635 to Tovinkere et al. (hereinafter referred to as "Tovinkere"). This rejection is traversed.

The claimed invention, as set forth in independent claims 7 and 23-24, relates to a safety sensor used for monitoring a danger zone. A safety sensor of this type is intended for failsafe, meaning without error, detection of objects in a danger zone (high detection security). This is achieved, on the one hand, with the reference background check for non-homogeneity as recited in the claimed invention and described in the present application:

> means for checking the reference background with respect to non-homogeneity, wherein the reference background is rejected as non-valid only if the non-homogeneity detected within a predetermined variance distance falls below a predetermined level **and** the reference background is otherwise classified as valid (emphasis added).

A further and critical precondition are the redundant structure of the camera system and the hardware and software for evaluating the camera signals. For example, as recited in claims 1 and 23-24:

> means, integrated into the at least two computer units, for releasing an object detection system in dependence on the classification of the reference background wherein for the object detection system a comparison is made between the images actually recorded with the two

cameras and the reference background is stored in the two computer units, wherein image characteristics are obtained for the object detection system in the two computer units from the image information that is input with the aid of the two associated cameras, and wherein the image characteristics determined in the two computer units are compared via the connection between the two computer units.

Among the applied documents of Honeywell, Barnett and Tovinkere, only Honeywell relates to a safety sensor for monitoring a danger zone.

However, the Examiner admits that "Honeywell is silent on the use of two cameras which form a redundant camera system using a beam divider and two computer units having different software". That is, the Examiner acknowledges that Honeywell neither anticipates nor suggests the redundant optical design of the camera system and the special redundant configuration of the hardware and software as evaluation system.

Consequently, Honeywell by itself cannot be opposed so as to prevent patenting to the subject matter of claims 7 and 23-24 of the present application and this fact is also not put in question by the Examiner.

The secondary reference to Barnett does not relate to a safety sensor for monitoring a danger zone, but relates to a system for tracking high speed moving objects such as aircraft and missiles (see the 1st paragraph in column 1 of Barnett). In addition and further removed from the claimed invention, the arrangement according to Barnett does not detect objects before a reference background (which must have a defined non-homogeneity).

As a result, the primary reference to Honeywell and the secondary reference to Barnett relate to completely different uses, so that, in the absence of applicant's own specification, one of ordinary skill in the art would not have reasonably combined these documents to achieve the claimed invention as asserted in the Action.

Further, even if one skilled in the art were to use Barnet in combination with Honeywell, the claimed invention would not result in a reference to the arrangement according to the claimed invention.

The Examiner's statement that Barnett discloses a redundant camera system is incorrect. The intent and purpose of a redundant camera system is to record the same image with two cameras, so as to increase the error safety and to compare these images for the error control. This is clearly explained in the claimed invention.

While Barnett discloses an arrangement with four cameras, these are used to purposely record different image information in that the four cameras scan the respective images in four different orthogonal directions. As a result, intended offsets are generated between these images to determine whether the object to be tracked is in the center of the camera range or is outside thereof (see 2nd paragraph in column 2 of Barnett). Thus, Barnett cannot suggest the claimed device for monitoring an area of coverage around a working tool where "at least two cameras, which form a **redundant** camera system, onto which a beam divider projects images of the area of coverage ... wherein one respective computer unit being associated with one of the at least two cameras for evaluated the image information recorded therein and wherein both computer units are coupled **so as to perform mutual checks** and the two computer units have different software structures" (emphasis added). It is respectfully submitted that one of ordinary skill in the art would reasonably modify Honeywell to monitor different quadrants, as taught by Barnett and then use a computer unit to perform mutual checks of the recorded information, as required by independent claims 7 and 23-24. In other words, why would one of ordinary skill in the art be motivated to scan the same area and then perform mutual checks as

recited in the claimed invention? Thus, the subject matter of the claimed invention is not suggested itself through a combination of Honeywell and Barnett.

The third applied document to Tovinkere has absolutely nothing in common with a safety sensor, such as is described in Honeywell.

As explained in lines 15-41 of column 1 of Tovinkere, the arrangement according to Tovinkere is used to realize a picture analysis in such a way that text sections are automatically extracted from the images. This subject has nothing in common with monitoring a danger zone with a safety sensor.

In addition, the arrangement according to Tovinkere is not a safety system with a redundant camera system and two computers that monitor each other and in which different software is installed for the mutual monitoring, as required by the claimed invention.

To be sure, the text passage cited by the Examiner from Tovinkere (line 50 in column 7 to line 21 in column 8 of Tovinkere) mentions using different detection systems for the semantic analysis. However, different detection results are generated with these detection systems by using different methods, wherein these different detection results are subsequently linked to form a total result. The different software structures, however, are not used for two computers to monitor each other, as required by the claimed invention and emphasized above.

The subject matter of independent claims 7 and 23-24 therefore also does not suggest itself based on a combination of Honeywell, Barnett and Tovinkere. Consequently, it is submitted that it is **only** with the benefit of reading applicants' own specification that the Examiner takes pieces from a different technology and combine the

same to achieve the claimed invention. This, as is well known in patent law, is impermissible hindsight. Without applicants' own specification, there is nothing to suggest to one of ordinary skill in the art to use two cameras to monitor one area and then evaluate the area with two different software structures, as recited in the claimed invention. Consequently, it is believed that the applied prior art does not render the claimed invention obvious so as to prevent patenting.

Claims 25-38 were rejected under 35 U.S.C. §103(a) as being unpatentable over Honeywell in view of Barnett and further in view of Tovinkere and U.S. Patent Application Publication No. 2001/0041077 to Lehner et al. (hereinafter referred to as "Lehner"). This rejection is traversed.

Lehner is directed to an apparatus and method for monitoring a detection region of a working element. Lehner is applied for teachings directed to a warning zone in addition to a security zone. While Lehner uses the term "background", Lehner does not disclose a redundant camera system, at least two computer units that are coupled to the two cameras of the redundant system "wherein one respective computer unit being associated with one of the at least two cameras for evaluated the image information recorded therein and wherein both computer units are coupled **so as to perform mutual checks** and the two computer units have different software structures" and means for checking the reference background recorded by a camera unit with respect to non-homogeneity, wherein the reference background is rejected as non-valid only if the non-homogeneity detected within a predetermined variance distance falls below a predetermined level and the reference background is otherwise classified as valid. Thus, Lehner cannot cure the defects of Honeywell and any combination of Honeywell and

Lehner would not result in the claimed invention. Withdrawal of this rejection is requested.

Conclusion

Applicant has fully responded to each matter of substance raised in the Office Action and believe that the case is in condition for allowance. Withdrawal of the rejections and allowance of claims 7, 9, 13-16, 18-19 and 23-38 of the application is therefore courteously solicited.

Should the Examiner believe that a conference would advance the prosecution of this application, he is encouraged to telephone the undersigned counsel to arrange such a conference.

Respectfully submitted,

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